The Chronicle

of the Early American Industries Association, Inc.

Volume XII | December, 1959 | Number 4

COFFEE GRINDING MILLS

By Laurence A. Johnson

"Though thou shouldest bray (beat small) a fool in a mortar among wheat with a pestle, yet will his foolishness not depart from him."
—*The Book of Proverbs,* xxvii, 22

ON April 27, 1958, I was the guest of Mr. Edward H. Pinto, at his home and Museum of Wooden Bygones, Oxhey Woods House, near Northwood, Middlesex, England. Mr. Pinto is well known in America as the author of *Treen or Small Woodware Throughout the Ages.* We discussed his 17th, 18th and 19th century coffee grinders (shown in figure one) that were on display in the museum and he gave me permission to use the picture and to quote from his article in the British *Antiques Review,* spring 1951 issue, "Wooden Mortars and Grinders."

The quotation from the Book of Proverbs was used by Mr. Pinto in his article and he wrote that there are "three methods of reducing a solid to a powder by pounding with a pestle in a mortar, by grating or rasping the solid against a rough surface, or by grinding with wheels" — all go back many thousands of years.

The first two methods must have come before the third, but which of the two was the pioneer method we shall never know, because nature in the raw provides man with the choice of either. The quotation heading this article sufficiently proves the antiquity of mortars. The principle involved is so simple and primitive that doubtless a large, naturally hollow length of sturdy stick must often have done duty for pounding before the making of pestles and mortars became a specialized craft. Likewise a course slab of rock provided a ready-made rasp or grater."

The following is taken from a card explaining the grinders shown in figure one:

"Coffee grinders: when first introduced into England, coffee was brayed (ground) in a mortar, but coffee grinders were made at least as early as 1665. The specimens, left to right, show the evolution of coffee grinders from the late 17th to the mid-19th century. Until about 1800, the majority of grinders were made by turners from ligum vitae. Usually they were constructed in four parts: the lid, often shaped as a finial; the feed; the grinding chamber; and the compartment for the ground coffee, which may be a well or a drawer, which may act as a measure, the handle, made to fold up inside." (Starting at top, reading from left to right)

1. Lignum vitae, from Hurstmonceux, Sussex, English, circa 1680.

Selection of 17th, 18th and 19th century coffee grinders.
(Pinto Collection) Copyright

Figure 1, Edward H. Pinto Collection.

2. Lignum vitae with brass bands, English, circa 1700.
3. A very rare specimen, hollowed from a piece of burry maple. All of the mouldings are worked on the solid, not applied. The base, lid, rim and rings are steel. It may be English or Dutch and is dated 1706.
4. Italian, inlaid with brass pique, circa 1700.
5. A Lignum vitae mortar, turned as a classical urn, English, circa 1750.

6. An English type, popular about 1765, it is shown on trade cards of that period.
7. The same as #6.
8. Coffee grinder, English, circa 1900.
9. A novel grinder, simulating a stoppered bottle. It may have been a novelty made for the 1851 Exhibition.

A search of the British patents in the United States Patent Office in Washington, D. C. reveals that the first patent for grinding mills that mentions coffee was number 1214, issued March 22, 1779, to Richard Dearman,

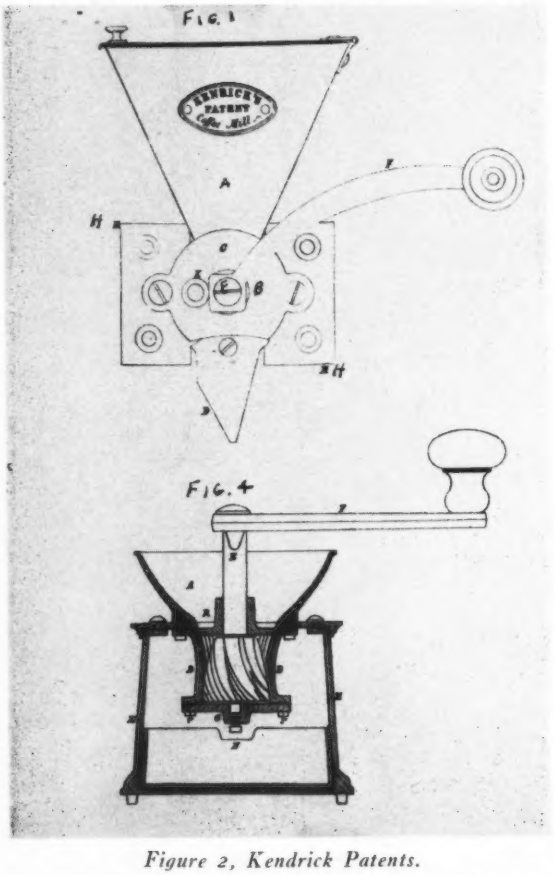

Figure 2, Kendrick Patents.

Birmingham, County Warrick, Ironmaster. It states in part:

"NOW KNOW YE, that in compliance with the said proviso, I, the said Richard Dearman, do hearby declare that my said Invention of the Entire New Method of Making Mills for Grinding Malt, Wheat, Barley, Beans, Pease, Groats, Rice, Indian Corn, Coffee, Pepper, Seeds, Drugs and all Kinds of Spices in the same Manner those Articles are Ground upon what are commonly called Steel Mills, is described in the Manner following" (that is to say) "to form the grinding parts of the mills, or what is called the inside and outside thereof, melt iron in a furnace or crucible and cast the same in moulds, of a suitable shape and size for the different purposes they may be intended, then to soften them, in order to file the teeth to a proper edge, neal (anneal) them in a gradual heat till that be affected, afterwards harden the grinding parts of the mill with hooves, horns, or bones of animals, or morine salts, laid on grounds or lees of malt liquor, or other acid or glutinous matter. Heat in a furnace, muffle or open fire, and plunge them in water . . ."

The first British patent for coffee grinders to include drawings with the specifications is British patent number 3916, issued May 23, 1815, to Archibald Kenrick of West Bromfield, County Stafford. Figure 2 shows two of the mills in this patent. The specification in part, concerning the mill, figure one at the top of the picture stated:

"A is the hopper, into which the matter to be ground is introduced; B is the conical box, case, or barrel cut with teeth in the inside; D, the spout, through which the coffee or malt runs when ground; E is the spindle of the cutter with the handle F fixed upon the end of it . . . My improvements are the flaunch H, formed out of the same piece of metal with the box B, and by means whereof the mill can be attached to a firm support."

The lower figure #4 in the picture, stated in part:

"Figure #4 is a section of what is called a box mill, to which my third improvement is applied, viz the socket R, at the large end of the box or barrel B, for the support of the spindle, is formed in the same solid piece of metal with the box or barrel, the socket or barrel in the cross bar at the lower end I made both to receive the lower end of the axle of the mill, and to contain by my regulating screw, by raising or falling to which the mill is adjusted to grind finer or coarser. This cross bar is fixed in the usual way by two screws. The external box or case M of the mill, together with the drawer N and the bason A, may be made of cast iron or of wood, as usual." (The word basin is spelled "bason").

Note the similarity of the box to number 8 in Mr. Pinto's collection.

In my collection I have a mill (figure 3) that resembles in many ways the mill at the top of figure 2. On the little brass sign is the inscription "Increase Wilson Best Quality New London." The first patent issued in the United States for coffee mills was to Theodore Bruff, Sr., of Maryland on January 8, 1798. The second was issued to Increase Wilson of New London, Connecticut on March 6, 1818. The date that Mr. Wilson made his mill is not known, however, it will still grind. Increase Wilson was born in Preston, Connecticut, on October 1, 1785 and died in New London, Connecticut December 18, 1861. After a good common school education he was sent to Plainfield Academy where he completed his studies. He had an early inclination for mechanics which was encouraged by his father. In 1809 he is mentioned in the land records as leasing a shop on Bradley (Potter) Street in New London. It is not clear where he learned his first practical knowledge of mechanics, but there is a tradition that he learned the tin business of Joseph Sizer who had a shop on the same street. There is another tradition that his first effort for himself was in making tin cups and other utensils of tin which he sold to the National Government during the war of 1812. It is also told that at this time he only had one or two helpers and that his first power was a mule on a tread mill. The old newspapers of 1814 and 1815 show that he was making what is known as "light hardware." About 1818 he

bought a lot on State Street, built a three-story building, manufactured on the top floor and rented the second for offices. On the ground floor he had a store for his numerous products. He ran long advertisements specifying each article that he had for sale and at this time had a patent on a coffee mill. The start of Wilson's Foundry was in 1825 when he bought a shop and lot on the west side of Union Street. In a short time he bought more land between State and Methodist Streets where he built many wooden buildings. He is credited as bringing the first stationary steam engine to New London and so, gone was the mule power. His sales and manufacturing increased until he was employing from 125 to 150 men. In early life he married Rachel Wright Fox of New Haven, who bore him five sons and six daughters. (Ed. Note — Increase Wilson) The Wilson Manufactury was incorporated, January 12, 1855 with Wilson as president and Nathan Belcher as secretary. (Biographical information furnished by Miss Helen L. Fraser, Secretary to the New London, Connecticut Historical Society.)

As most of our patents prior to 1836 have either

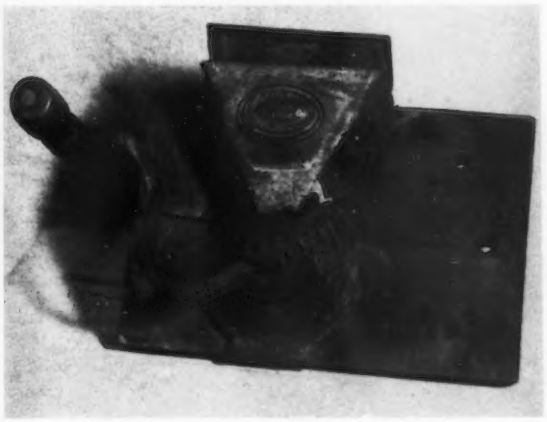

Figure 3, Increase Wilson Patent.

been lost or destroyed by fire, a search of the Journals of the Franklin Institute sheds some light to early improvements in coffee mills from the period 1828 to 1837.

"List of American patents issued in June, 1832, with remarks and exemplications by the editor. For an improvement in the *Coffee Mill;* Edmund Parker and Heman White, Meriden, New Haven County, Connecticut, June 22. This coffee mill is a modification of the cast iron vertical coffee mill most generally in use. There is, however, some difference in the mode of combining the parts and for these the patent is taken." Journals of the Franklin Institute, vol. xi, page 25.

"*For A Double Coffee Mill*: Thomas W. Witherby, and Joseph Torrey, Milbury, Worcester County, Mass. July 17, 1832.

The difference between this mill and the cast iron vertical coffee mill used by most persons, consists in its being furnished with two revolving toothed nuts, covered by two corresponding shells, one handle serves to turn both and one regulating screw to set them. The hopper has a removable partition in it, allowing two different articles to be ground, without interferring with each other, or, of course, both may be used for the same article." (ibid, page 98, number 18).

"*For a Coffee Mill*: Ami Clark, Berlin, Hartford County, Connecticut, July 20. We are told by this patentee that his improved coffee mill is made of cast iron, two shells, and axle or shaft and a crank. By turning to number 18, it will be seen that a patent was granted for a coffee mill which was 'furnished with two revolving toothed nuts, covered by two corresponding shells,' it seems, however, that this last was not the original mill as the present patentee, whose papers have lain some weeks in the patent office, says that he does not claim the double mill heretofore invented and said to be patented by a person unknown, having shells with radiating teeth," but he

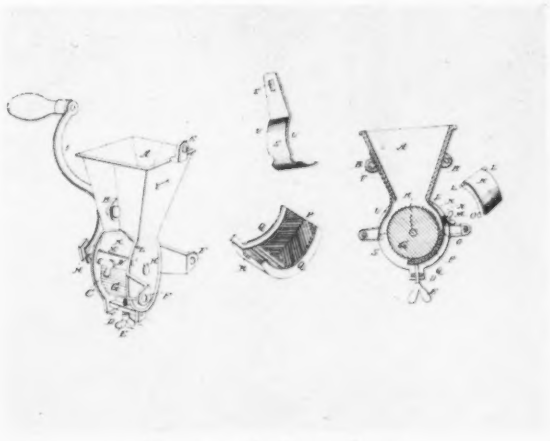

Figure 4, H. Twiss Patent.

claims only the peculiar construction of his own by which double the work can be accomplished in a given portion of time. "We apprehend, however, that this double labour will be accomplished with the same degree of power, although something may be saved in this particular, as regards friction." (ibid, page 100).

Patent number 243 was issued June 19, 1837, to Herman Twist of Meriden, Connecticut, shown in figure 4. The specifications state in part: "A, represents the hopper made in two parts connected together by ears and bolts B, C, side plates between which the grinding cylinder revolves, being a continuation of the sides of the hopper; D, cross bar connecting the lower ends of the side plates together and through which a thumb screw E, passes for pressing the shell or concave toward the cylinder and regulating the distance between them for grinding coarser or finer. F, ears through which screw bolts pass for securing the mill to any convenient place. G, the grinding cylinder about an inch and a half in length and about two and a half inches in diameter having a shaft. H, about three inches in length passing through its center and through the side plates C, extending beyond the face of the front plate one inch and three-eights and is three-fourths of an inch in diameter, to which a crank I, is to be fitted in the usual manner. The other end of the shaft is three-eighths of an inch in diameter and forms a pivot or gudgeon passing through a corresponding hole in the plate." . . . "A great advantage attending this improvement is that the substance ground is received at one side of the cylinder and as soon as thoroughly ground is discharged at the opposite side and is not as in common

mills, carried around after it is ground and finally discharged by the pressure of the coarser materials and the increased motion of the cylinder and hence both time and labor are saved."

Two very early mills are on display in the Smithsonian Institution. Figure 5 — ground coffee for Martha and George Washington at Mount Vernon and figure 6 was used in the Copp homestead, Stonington, Connecticut. Note the similarity of these to the Twist Mill, figure 4.

The mill shown in figure 7 is displayed beside my Wilson Mill in Johnson's Old General County Store Museum. The small sign on the mill reads, "J and E. Parker Pat. Feb. 7, 1860." This was patent number 27,065 issued to John and Edmund Parker of Meriden, Connecticut. In the patent they begin their list of specifications with the following: "Our improvements have for their object the simplifying of the construction, as well as increasing the efficacy and usefulness of the coffee mill for domestic purposes. As is well known, these implements are almost always to be used by persons of but little discretion, as servants, and therefore should be constructed as to avoid the possibility of being injured by careless handling of adjusting, while, as they are required so generally as a household implement any improvement which reduces the cost of construction becomes of considerable importance." This is the Edmund Parker mentioned as granted a patent with Herman White, both of Meriden, June 22, 1832 in the *Journals of the Franklin Institute.*

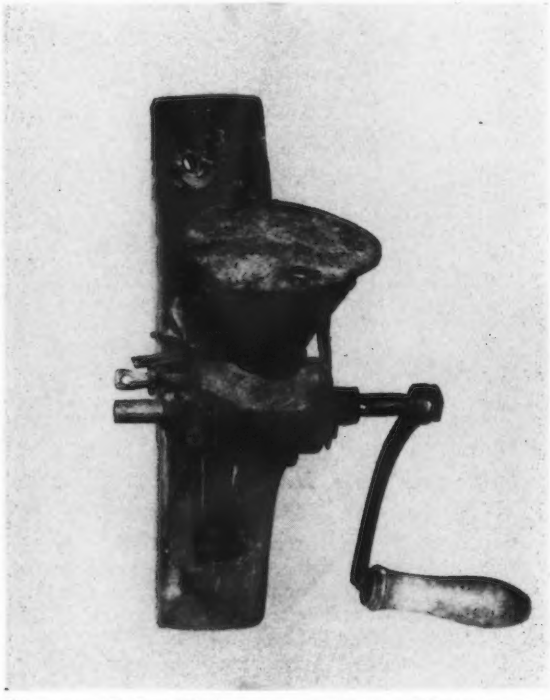

Figure 5. Coffee Mill owned by George Washington at Mount Vernon. Smithsonian Institution. Lent by Walter G. Peter.

Edmund Parker had two brothers, Charles and John and all three were at one time or the other manufacturing coffee mills as well as other items. John Parker was born August 30, 1805 and was licensed to preach when seventeen. He preached until 1839, when his voice failed and he entered into business with his brother, ex-mayor Charles Parker and he died of measles June 21, 1892. Edmund died April 19, 1866, aged 56 years, 2 months and ten days. Charles Parker, who lived to be 92 was Meriden's first mayor, and dominated the rest of his family in their city's history. He was an energetic and versatile businessman, and his manufacturing enterprises were extensive. Because it is pertinent, you will find enclosed a copy of some material included in a 1906 history of Meriden concerning Charles Parker and his company. "For a few years, beginning 1833, his brother, Edmund Parker and Herman White were associated with him as partners, the firm was known as Parker and White. His brother retired in 1843 and Mr. White the year following." . . . "On a portion of the land between Elm and High Streets, Charles Parker built a stone shop and in 1832 began the manufacture of coffee mills. His motive power was a blind horse, who propelled a pole sweep, which, hour after hour, and day after day, plodded around in a circle, which was the only power of the factory until 1844, when the steam power introduced at the factory was the first used in Meriden. The Parker coffee mills, made in fully one hundred sizes and styles, have now been on the market for practically three-quarters of a century; when first made they were sold by the small peddler and are now shipped in carload lots to this and foreign countries."

Figure 6. Coffee Mill in the Copp Collection, Smithsonian Institution.

The Parker Company made scores of other items such as guns, spectacles etc. and employed 1500 men.

(Biographical information from Miss Lillian N. Gerhardt, Reference Librarian of the Curtis Memorial Library, Meriden, Connecticut.)

Figure 8 shows the first advertisement on coffee mills in a trade paper that I have been able to find. It was published in the January 3, 1863, issue of *The Grocer*, London, England. Note the similarity to the Kenrick and Wilson Mills.

Figure 9 accompanied an article on "Corn and Coffee Mills" in the *American Agriculturist*, September, 1847. Note the beginning of placing the fly or balance

Figure 7, J. and E. Parker Patent.

wheels on the grinders. This was a great help for the grocer as without the flywheel one could not get up the necessary momentum to do an efficient job — how well, I know!

Figure 10 is an 1884 Lane Brothers catalog showing five types of mills including Beriah Swift's patent, number 4,149, issued August 16, 1845. Note the similarity of the Swift Number 2 Side Mill in the picture to the mill, figure 63 in figure 9.

THE GROCER. JAN. 3, 1863.

IMPROVED MILLS,

For Coffee, Pepper, Spices, Rice, Flour, Malt, &c., &c.

SIZES and PRICES.

Messrs. Morgan Brothers, 21, Bow-lane, London.

A DISCOUNT IN QUANTITIES OF SIX AND UPWARDS.

Figure 8, Advertisement, "The Grocer," 1863.

The mill shown in figure 11 is in my Old County Store Museum. It is patent number 152,655, issued June 20, 1874, to William J. & John G. Lane of Millbrook, New York. This is "The Swift Mill - Size 'B,' thirty inches high "with two 20 inch fly wheels."

968 CORN AND COFFEE-MILLS.

CORN AND COFFEE-MILLS.

Fig. 64.

Fig. 65.

Figure 9, American Agriculturist, September, 1847.

$18. (page 16. 1884 Lane Bros. Catalog). This mill was in the George K. Graves general store at South Butler, New York, where the Johnson family began trading in 1848. It appeared in the store's inventory of 1881 and was bought about 1876. The application for patent was filed January 6, 1873 and part of the specifications read: "Two balance wheels G and F are placed upon opposite sides of the standard, thus tending to keep the standard balanced . . ." I believe this to be one of the first two-wheeled mills.

My pride and joy is the mill in figure 12, this carried patent number 159,517 and was issued to the Lane Brothers February 7, 1875. It is not dumpy looking as the one in figure 11, but built with some elegance like the London Coffee Mill shown on page 5, of the July 5, 1873 issue of the *American Grocer* shown in figure 13. This type of mill caused the American manufacturers to make more elegant ones and I have observed this in the 1877 catalog of the *Enterprise Company*. All these mills are graceful except the Enterprise mill shown in figure 14. This mill is under patent number 104,537 issued June 21, 1870 to John Gulick Baker of Philadelphia, Pa. I purchased this mill many years ago from Jason Bushnell of Vernon, Vermont and he informed me that he bought it from a farmer who was using it to grind grain. This mill might be for general use as are the ones in figure 9. It is now in the A. J. Bayless, Cracker

Barrell General Store Museum, Phoenix, Arizona.

Throughout central New York there used to be many Lane and Enterprise mills. Both these companies have rather interesting histories. The Lane Company was started with the organization of the Swift Mill in 1845 in Millbrook, New York and from there was brought to Poughkeepsie, New York in 1882 by John G. and William J. Lane. This business was an outgrowth of Beriah Swift's inventions and the Swift coffee,

Mills for Family Use.

No 0 SIDE MILL.
$9.00 per dozen.

No. 1 SIDE MILL.
$14.00 per dozen.

No. 2 SIDE MILL.
$22.00 per dozen.

No. 10 TABLE MILL.
$9.50 per dozen.

No 11 TABLE MILL
$15.00 per dozen.

Our Patent Table Mills for family use meet the wants of a large class. No tools are required to place them in position, as they can be firmly secured to an ordinary table or shelf by simply turning a thumb screw, and as easily removed, if desired, when not in use

We think their advantage in many cases over those in common use will be fully appreciated on inspection. They are packed in boxes, 1 dozen or ½ dozen each, as desired.

Figure 10, From Lane Brothers' Catalogue.

spice and drug mills were long a leading business. The Lanes married into the Swift family and that is how the Lane name came to be connected with the business. They were still making coffee mills through World War I, but after the depression which followed, the business declined and in 1928 they ceased making coffee mills and even destroyed the patterns. The company is now called Lanebro because there is another Lane Brothers in New York State and when the present group tried to incorporate they could not use the same name.

The Enterprise Company was rather famous for scores of household, drug and food store items and may have been one of the largest in their field. They sold out to Silex Company in 1957 and upon writing to Mr. M. Diamond of the Silex Company, he informed me that they did not retain any of the historical documents that were in Philadelphia, and suggested I write Mr. T. Henry Asbury, former president and grandson of the

Figure 11, Lane Brothers' Patent, 1874.

original founder. Again I was disappointed as Mr. Ashbury wrote me that they did not retain the old files, and after the Silex Company sold some of the lines, such as coffee mills, they disposed of the old records.

However, Mr. Asbury did inform me that the Enterprise Manufacturing Company of Philadelphia, Pa., was incorporated September 8, 1866 and originated from the firm of Henry Asbury and Company. In 1870 they manufactured cast iron mechanical coin banks in an effort to get a fast start and production on a foundry they had opened that year.

The thought occurred to me when trying to find out information about this company that this might be a good

The Swift Mill No. 15.

This is a very neatly designed and convenient sized Mill, finished in vermilion, jet black and gold, having a close drawer for receiving Coffee with two twenty-inch fly-wheels, and our patent method of opening for brushing out or removal of obstructions.

Capacity- About one and a half pounds per minute.

$15. Boxed.

Figure 12, Lane Brothers' Patent, 1875.

ESTABLISHED IN 1840.
LONDON COFFEE MILLS.
HENRY TROEMNER,
MANUFACTURER OF
STEEL COFFEE & SPICE MILLS
710 MARKET ST., Philadelphia.
Illustrated Price Lists of our Mills, Scales, Canistors and Grocers' Fix
tures sent on receipt of Postage Stamp.

Figure 13, London Coffee Mill.

project for the Association to attempt to get these companies with early histories to either safeguard their old records or to turn them over to some historical society where they would be available to students of early American history of industries.

It is impossible to list all the many companies that were active in the coffee mill field. Many Elgin Mills were used in the middle west and far west. A letter from Miss Anna H. Carlson, Asst. Reference Librarian, The Gail Borden Public Library, Elgin, Illinois stated in

Continued on page 48

Figure 14, Enterprise Company Catalogue, 1877.

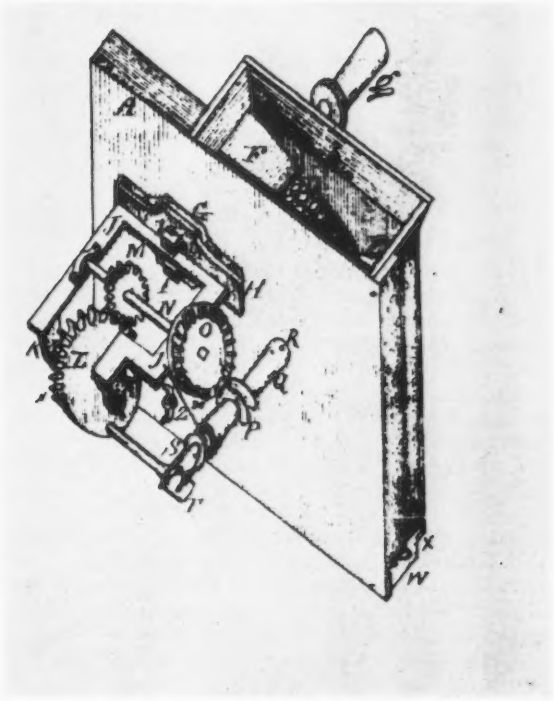

Figure 15, DeWitt C. Warner Patent.

Figure 16, Sears Roebuck Catalogue, 1903, page 550.

OF TOOLS AND MEN

By Ralph Hodgkinson

(This is to introduce a series of articles that are being prepared by Mr. Hodgkinson, Old Sturbridge, on the *Sixth Sense of the Craftsman,* for publication in the *Chronicle.* The Editors feel this will be informative and valuable to the history and beginning of our early American industries.)

THE question "Which came first, tools or men?" is not as easily answered as it might seem at first glance. Man was created already equipped with an excellent set of tools with which to lift, push and pull, clamp and pound, cut and grind, gouge, scrape, and abrade, and even to measure. These were of course his limbs, hands, teeth, nails, and eyes, assets which are often thought of as a means of self defense. Thinking of these as tools, and adding the fact that man was also endowed with a marvelous accurate control system for directing and regulating them, leads to some interesting thoughts.

For example, if we agree that man came equipped with these useful parts of his own body, it becomes easier to understand how he existed and developed so long before acquiring the things we now call "tools." He could dig quite well with his hands, especially in soft materials. It was only when he wanted to dig greater quantities, or in harder materials that he needed to think of using a clam shell or thin piece of stone later a piece of metal, later still a piece of metal shaped like his cupped hand, and finally the combination of a specially tempered metal blade and a well shaped wooden handle. Each of these steps extended the reach and capacity of his own natural tools and power. In the same way came man's progress in the art of pounding. While he could do this pretty well with his fist, he could pound with greater force and more comfort with a suitably shaped rock in his hand, — even more so when a handle was added.

Such implements, the ones in which we as a society are interested, have been created by man. Without man, they could not exist, could accomplish no work, and would be of no value whatever. On the other hand, man can (and did) not only exist, but also flourish and develop without a single one of these tools. In the relationship between tools and men, man is the creator, the god, the one who should be, and sometime is, the master. The tool is only an extension of his own physical powers, and a means of making realities out of the ideas which spring from man's unlimited imagination.

In itself, the tool is inert, lifeless, generally incapable of any action. Only in its best condition and in the hands of a skilled craftsman can it fulfill its purpose. Then, and only then does it take on its remarkable characteristics as a fascinatingly useful responsive and purposeful instrument somewhat as the violin, in itself only an example of fine woodworking, springs into richly resonant life only in the hands of the artist.

Let us by all means retain and promote our interest and responsibility in the study and preservation of the tools themselves. Let us maintain and develop our respect for these tools as valuable, tangible contacts with the past. But let us also remember that almost every tool had a handle, that through this handle came all the power and direction which made it useful, and that these had to come from a man.

If we do this, it becomes quite proper and desirable for us to give some serious thought to the "man" who is and always was such an unseparable part of any tool. For this purpose, a series of short articles is being written under the general title, "The Sixth Sense of the Craftsman." These are designed to throw light on some of the sensory and extrasensory powers of the craftsman as shown in several crafts. It is hoped that they will also stimulate ideas as to other examples of these powers which our readers will send in.

Publications of Interest

Contributions from Museums of History and Technology: This hardbound publication recently issued as Bulletin 218, Papers 1 to 11 by the United States National Museum, the Smithsonian Institute, Washington, D. C., 1959 will be of particular interest to the members of the Early American Industries Association. The 11 Papers included in this 201 page publication deal with the following subjects: The Schofield wool-carding machines (Grace L. Rogers); John Deere's steel plow (Edwin C. Kendall); The beginnings of cheap steel (Philip W. Bishop); The Auburndale Watch Company (Edwin A. Battison); Development of the phonograph at Alexander Graham Bell's Volta Laboratory (Leslie J. Newville); On the origin of clockwork, perpetual motion devices, and the compass (Derek J. DeSolla Price); Mine pumping in Agricola's time and later (Robert P. Multhauf); The natural philosophy of William Gilbert and his predecessors (W. James King); Conestoga wagons in Braddock's campaign, 1755 (Donald H. Berkebile); Old English patent medicines in America (George B. Griffenhagen and James Harvey Young); Why Bewick succeeded: A note on the history of wood engraving (Jacob Kainen).

The information contained in these eleven papers is documented to an extent not usually found in publications which are directly related to our field. The Editors in reviewing this publication cannot emphasize this important factor enough.

The illustrations, which are composed of actual photographs and well executed line drawings are clear and are extremely helpful to a student of Early American Industries. In some cases, the illustrations are photographs, clearly executed, of actual working parts of various tools and implements.

Many members will recall the current efforts being made by our Association under the direction of Mr. Edward Durell, of Columbus, Ohio in assembling material on the Conestoga wagon. The article by Mr. Berkebile on "Conestoga wagons in Braddock's Campaign 1755" will recognize an encouraging trend which is bound to supplement the efforts of E.A.I.A.

The editors feel that this publication would be a valued addition to any member of our Association's library. Copys may be secured from the U. S. Government Printing Office, Washington 25, D. C. Price, $2.50 per copy.

The Chronicle

Early American
Industries Association, Inc.

The purpose of the association is to encourage the study and better understanding of early American industry, in the home, in the shop, on the farm, and on the sea, and especially to discover, identify, classify, preserve and exhibit obsolete tools, implements, utensils, instruments, vehicles, appliances and mechanical devices used by American craftsmen, farmers, housewives, mariners, professional men, and other workers.

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Communications regarding the contents of *The Chronicle* and back issues should be addressed to the Editors; suggestions for members to John P. Fox ;all other matters to the President Address as here given.

DUES

The annual dues are payable on January 1st and are $5.00. The *Chronicle* is published quarterly and is sent to all members without additional charge. Printed on the press of The *Virginia* Gazette, founded 1736, *Williamsburg, Virginia.*

Minutes of The Fall Meeting

THE business meeting of the Early American Industries Association was called to order by President Fred Sabin following a hearty banquet and remarks both enlightening and entertaining by Dr. Edward Riley, Director of Research for Colonial Williamsburg.

Dr. Sabin acclaimed the success of this meeting, noting that 108 persons were registered as contrasted with less than 50 when the E.A.I.A. last met at Williamsburg in 1953.

Telegrams of greetings and regrets from Lewis Wiggins and John Fox were read by Dr. Sabin.

John Still, as secretary pro tem, read the minutes of the meeting of the Committee on Publications and of the Directors' Meeting.

Edward Durell announced the definite and tentative sites for 1960 and 1961 meetings, as follows: Shelburne, Vermont, June 17-19, 1960 and Cooperstown, New York, October, 1960 (definite); Peterborough, New Hampshire, June, 1961, and Staten Island, New York, October, 1961 (tentative).

At Dr. Sabin's request, new members and those attending a meeting for the first time rose and were acknowledged.

Mrs. Josephine Peirce, treasurer, read the financial statement which was accepted without question. Dr. Sabin reported that very few individuals or museums have contributed more than the required $5 for membership.

James A. Keillor inquired what had become of the motion pictures of craft operations which had allegedly been offered to the E.A.I.A. at one time by Mr. and Mrs. Theodore Bailey of Harriaman, New York. Dr. Sabin referred the matter to William D. Geiger for investigation, and Leland A. Smith offered to call upon the Baileys who are his neighbors, and to try to obtain the movies.

Mr. Geiger commented on the problems involved in editing the *Chronicle,* principally the scarcity of material, and he made an impassioned plea for articles from members.

At Dr. Sabin's suggestion, the members gave an enthusiastic rising vote of thanks to Colonial Williamsburg, its staff, and especially to Mr. Geiger and Mr. Reveille for the superb program and the cordial hospitality extended to the E.A.I.A. during this meeting, after which the session adjourned.

John S. Still
Secretary Pro Tem

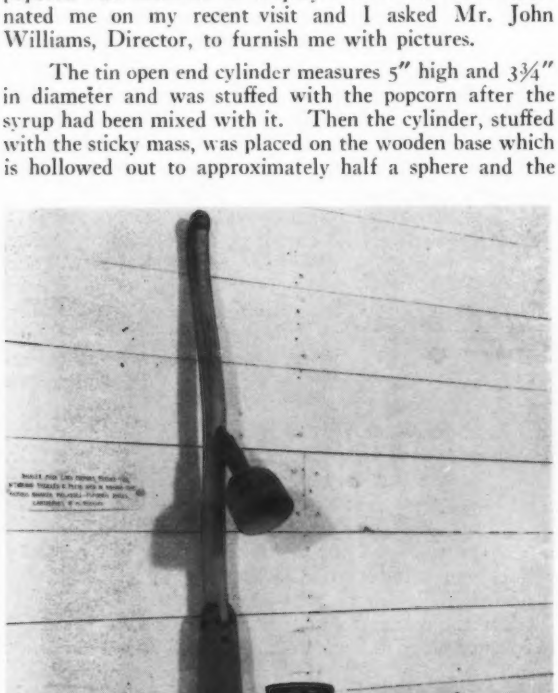
IT is with deep regret that the Editors of *Chronicle* report to the members of the Early American Industries Association the death of Mr. J. A. Osborne, the Vice-President and General Manager of the Virginia Gazette Incorporated. This organization is the modern day predecessor of the original Virginia Gazette first published in Williamsburg, Virginia in 1736. The *Virginia Gazette* has extended every courtesy and assistance to the Early American Industries Association since the *Chronicle* was first published in Williamsburg, Virginia, in 1952.

POPCORN BALL MACHINE

By Edward Durell

THOSE members who attended the Regional Meeting of the E.A.I.A. at the Shaker Museum in Old Chatham, New York, earlier this year perhaps noticed the popcorn ball machine on display there. This item fascinated me on my recent visit and I asked Mr. John Williams, Director, to furnish me with pictures.

The tin open end cylinder measures 5″ high and 3¾″ in diameter and was stuffed with the popcorn after the syrup had been mixed with it. Then the cylinder, stuffed with the sticky mass, was placed on the wooden base which is hollowed out to approximately half a sphere and the

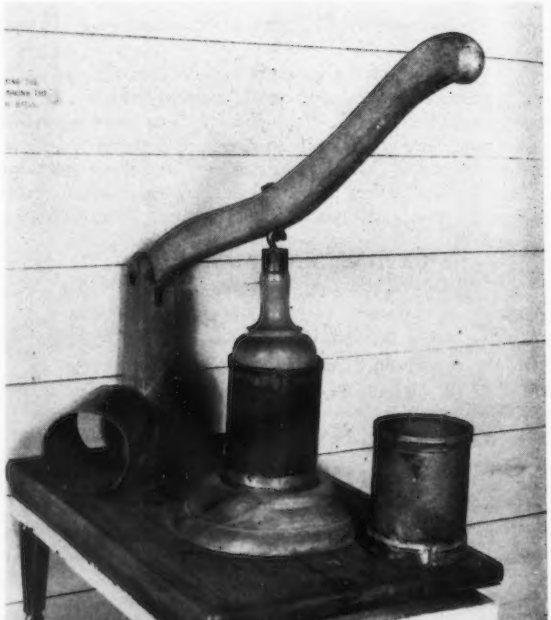


Popcorn Ball Machine Open.

lever was pulled down. The plunger which is attached to the lever is hollowed out to make the other half of the sphere and when it is directed to the top of the can containing the sticky popcorn and pressed home, the popcorn is firmly pressed into a ball and can easily be removed from the cylinder by lifting off the wooden piece. The cylinders were well greased with lard.

Mr. Williams wrote: "The Museum acquired the device from the Canterbury Shakers and I would date it roughly circa 1860-1880. It was used by them for special little parties on cold winter nights after all the work of the day had been finished (if this was ever possible)."

Apparently this could be quite a rapid operation, as three people cuold be busy filling the tin cylinder and another operating the lever with the plunger.



Popcorn Ball Machine Closed.

ANNIVERSARY ISSUE

IN accordance with instructions given by the President and Directors of the Early American Industries Association, the twenty-fifth anniversary issue of the *Chronicle* is to be offered to members at a special rate during the month of February, 1960. The stated price of this issue is $4.50, but it will be available to members during February 1960 for $2.00 per issue. Please direct your request to Mr. W. D. Geiger or Mr. Raymond R. Townsend, Editors of The *Chronicle,* Colonial Williamsburg, Williamsburg, Virginia.

SPRING MEETING

THE Spring meeting of the Early American Industries Association will be held at the Shelburne Museum, Shelburne, Vermont. The meeting will be held on June 17, 18, and 19th, 1960. Mr. Frank Wildung, who is responsible for the outstanding tool exhibits at the Shelburne Museum will be the Program Chairman for this meeting. The March 1960 issue of the *Chronicle* will contain details of this meeting, and its program as well as illustrations of the Shelburne Museum. Advance mailing will also inform members of the details of the program. The President, Directors and the Editors urge members to attend this meeting at one of our outstanding open air museums.

Early American Industries

The French Method of Nail-Making

By J. Didsbury

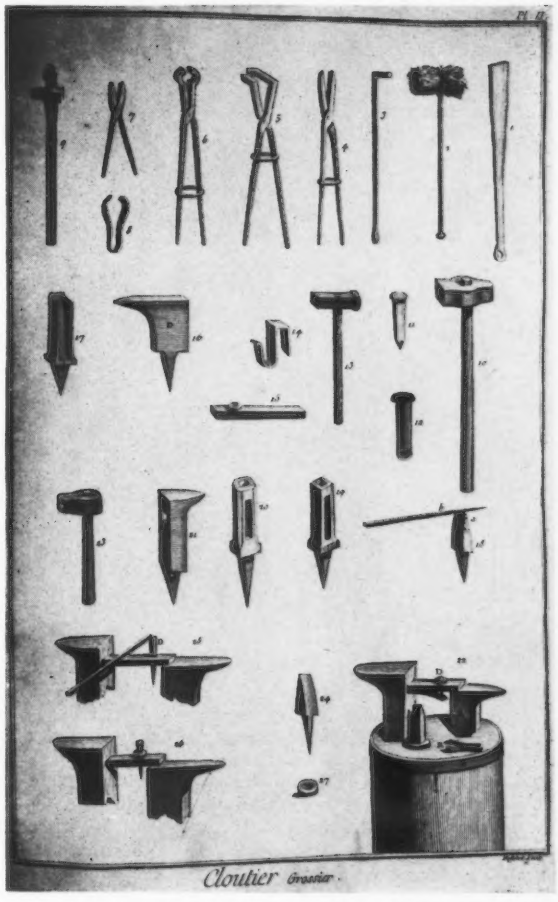
THERE are two schools of thought concerning Denis Diderot and his French Encyclopedia. One school argues that the tools and methods used by French craftsmen of this period were different (and some say radically different) to those of England and consequently are of no value in the study of early American craftsmen's tools and methods. The other school naturally takes the opposite view. Since I belong to the latter I must defend M. Diderot. Any good scholar of 17th, 18th and early 19th century sources is well aware that many Frenchmen came to this country to settle; in some cases, whole communities were established consisting almost entirely of Frenchmen. Would not these settlers have brought their own tools and methods? And would not an intelligent English craftsman have been ready to adopt any tool or method that would enable him to ease or better his work? (Despite continuous Anglo-French conflict the English Channel was no obstacle in that period). There is no doubt that several crafts were introduced into England from French industry, wigmaking, originally French and adopted by the English, and probably others could be traced back to French origin. Therefore the tools and methods must have been French. I have so far used Diderot in studies of coopering, needle making, pin making, wigmaking, bookbinding, fish hook making, and have found that the tools and methods were basically the same as used by the English even as late as the mid-nineteenth century. There is no argument that Diderot made some mistakes. With the monumental task he undertook, it is natural that errors would creep into his work, but, can we honestly say that we do not make errors in our investigation today.

Regardless of which school of thought one belongs to, we should feel deeply indebted to M. Diderot for at least having the foresight and desire to leave to the future a record of his day. I wish that our early craftsmen would have done the same!

Diderot's method of making nails is the only one of his techniques that I have been unable to find used over here to date. This is puzzling as it is a far superior method to that employed by the usual nail-making tools one finds in practically all the blacksmith shops in our open-air museums — that of the bar of iron with various size heading holes.

The French set of tools consisted of a nail-anvil, figure 21; the nail mould made of iron about an inch square and ten inches long that is inserted into the nail anvil about five inches with a spring underneath, figure 15, and "D" in figure 22; the post, figure 16 upon which the nail-mould rests; and the anvil cutter or hardy, figure 24. Diderot is careful to state that the nail-anvil is of iron but it is better and more durable if it has a head of tempered steel.

The nail rod was heated and pointed on the nail-anvil (A of figure 22); then placed over the hardy as shown in figure 18, cut almost all the way through, then placed in the hole of the nail-mould and broken off at the cut as shown in figures 25 and 26; then struck with a hammer to make the head. The spring under the nail



Tools of a French Nail-Maker.

mould against which the point of the nail rests is tapped with the hammer to raise the finished nail. It is removed with the tongs shown in figure 8 and "B" in figure 22 and thrown in a nail box. Various size nail-moulds could be used to make the many variety of sizes. Figures 19 and 20 show the type mould used for making bolts and spikes.

The nail-maker always had a number of nail rods heating in the fire at one time. When he inserted the nail rod into the nail mould and broke it off he immediately replaced it in the forge to reheat, thus as he finished a nail he always had a heated rod ready to make another.

It is astounding the number of nails a worker could make by hand. An early nineteenth century French Dictionary states that a good nail-maker could make between 12 and 20 nails a *minute*, depending on the size. A Cyclopaedia of 1854 indicates "one man making 170,000 double flooring nails, 1,200 or 1,000 of 20 lbs weight for 2 successive weeks!"

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The Chronicle

Coffee Grinding Mills

Continued from page 43

FOR COMPLETE INDEX REFER TO PINK PAGES IN MIDDLE OF BOOK.
551
National Coffee Mills.
National Flour Mills.
Our 10-Cent Coffee Mill.
Our 10-Cent Side Coffee Mill.
Rat and Mouse Traps.
National Coffee Mills.
SAVE MONEY ON YOUR GROCERIES.
SEND FOR OUR BIG COMPLETE 32-PAGE GROCERY PRICE LIST,
THE MONEY YOU WILL SAVE BY BUYING GROCERIES FROM US

Figure 17, Sears Roebuck Catalogue, 1903, page 551.

part: "The Elgin National Coffee Mill was made in Elgin by C. H. Woodruff Foundry in about the 1890's . . . Woodruff and Edwards, Incorporated, as it is now known . . . is over 90 years old." . . . "We called the office . . . Mr. Edwards said all the records on the Elgin National Coffee Mill were destroyed in the fire of 1918 . . ." "He did remember that manufacture of the mill was discontinued in 1917. He also remembered that the William Wrigley Company, the chewing gum firm, was their largest customer. The mills were given to the grocers as premiums for selling the most boxes of their chewing gum"!

One of the most interesting inventions I ran across while working on this subject was the patent issued to Dewitt C. Warner of Chicago, Illinois, January 31, 1871, number 111,406. This was for "Improvements in Combined Coffee-Mills and Apple-Parers." This is shown in figure 15. There is a boy after my own heart, what can go better with a cup of coffee than a nice piece of apple pie!

Figures 16 and 17 are from the Spring and Fall, 1903, Sears Roebuck catalog, number 112, pages 550 and 551. On page 550 are four types of the new wall mills which appeared by this date, to have become more and more popular. It is interesting to note the 19c "Side Coffee Mill" shown on page 551 of this catalog. (Column 2, H for mill) This appeared for the last time in 1904, Spring and Fall issue.

Nail-Making

Continued from page 47

The tools at the top of the drawing are the usual blacksmith tools. Figure 1 was used to clean fires; figure 2 was a sort of wire brush used to clean scale from the heated iron; figure 3, a poker; figure 4, tongs or pincers; figure 5, hoop tongs; figure 6, pincher tongs, figure 7, tongs; figure 9, chisel; figure 10, striking hammer; figure 11, a punch; figure 12, and 13, swages; figure 14, a domestic or hold fast; figure 17, a nail chisel; and figure 23, a hammer.

Nail Making Device Exhibited at Williamsburg.

Mr. James C. Sorber, of the Board of Directors of the Chester County Historical Society, West Chester, Pennsylvania had a rather unique nail-making device shown above at the Whatsit session of the Fall Meeting of the E.A.I.A. at Williamsburg. The iron rods were a little over one inch square, the length of the longest was 14 inches and the shortest 8½ inches. Mr. Sorber believed that the long rod was held in a vice when the tool was being used. The short arm has a hole into which the heated nail rod is inserted and hammered down to form the head of the nail. It is possible that the top of the arm inserted into the vice was used or could be used to point the nail. This is the first of this kind we have ever seen. Have any of our members seen anything like it?

We would be interested to know if any of our readers have ever ran across any such tools.